

> **2033D** UPS
UNINTERRUPTIBLE
POWER SUPPLIES

2033D



Superior Performance, Reliability and Safety Come from Experience. Our Uninterruptible Power Supply Systems Ensure All Three.

Mitsubishi Electric has been developing and manufacturing Uninterruptible Power Supply (UPS) components and systems for more than three decades. That experience, and the continuous application of new power-device technologies to further improve products in the industry clearly explain why Mitsubishi Electric has dominated a large portion of the world UPS market for years.

When purchasing a UPS system, the key word is “dependability.” And there’s one company that many rely on. Uninterruptible Power Supply systems by Mitsubishi Electric.



IGBT – Transistors with Excellent Performance Characteristics

Mitsubishi Electric is the leading manufacturer of Insulated Gate Bipolar Transistors (IGBTs), and now utilizes IGBT in the converters and inverters of its 2033D Series UPS systems. These advanced, high-performance transistors provide a variety of intelligent features.

- High Ampacity Transistors (600A)
- High Speed Switching
- Low Control Power

Low Input Current Harmonics (THD)

- 4% typical (100% load)
 - 5% typical (75% load)
 - 7% typical (50% load)
- (No additional filtering required)

Generator Sizing Ratio (UPS)

- 1:1 (UPS kVA/Generator kW)

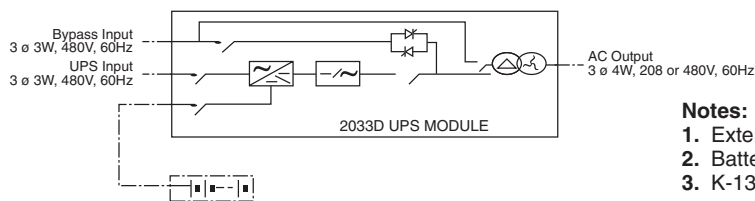
Low Heat Loss / High Efficiency

Use of IGBT enables efficient high-speed switching thus reducing heat dissipation in the UPS. (Higher efficiency means lower cost per kilowatt to the customer.)

Mitsubishi – The Leader in UPS Technology, Quality & Reliability

2033D ONE-LINE DIAGRAMS

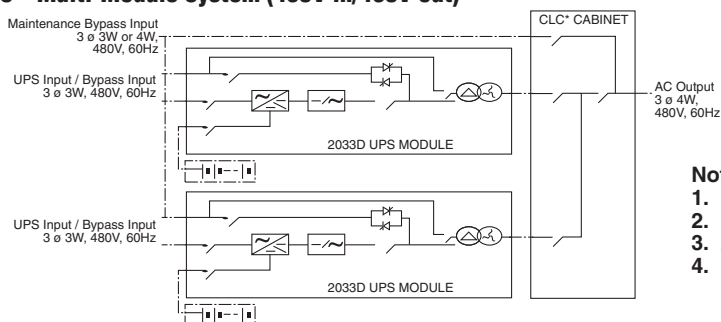
SMS • Single Module System



Notes:

1. External Maintenance Bypass System (MBS) is optional.
2. Batteries included in 30kVA only.
3. K-13 isolation stepdown transformer (208V output)

MMS • Multi-Module System (480V in/480V out)



Notes:

1. Maximum 2x System for redundancy only
2. CLC* (Critical Load Cabinet includes Maintenance Bypass)
3. All CLC Cabinets engineered and supplied by MEPEI
4. For 208V output – consult MEPEI

S O F T W A R E

What is DiamondLink™?

DiamondLink is user-customizable power monitoring, management and shutdown software, designed to provide information about the power condition of the UPS system.

How does DiamondLink work?

DiamondLink is designed to run on network server or workstations in any office environment. The software will monitor the status of your UPS and, when critical events occur, will perform a graceful unattended shutdown.

Features

- Automatic unattended shutdown
- Smart messages can be user-defined
- User-defined actions for a specific list of power-events
- Color coded power event logging
- Built-in graphing routines allow customized graphs to be created on-line
- DiamondLink can be used with all Mitsubishi single-phase and three-phase products

Specifics

- Power history graphs
- Custom user defined events
- Data log viewer
- E-mail configurations
- E-mail options for power events
- Event action
- Events log file
- Modem alert notification
- Pager notification
- Paging option

Supported Operating Systems

- Microsoft Windows®
- Microsoft Windows NT
- Microsoft Windows '95
- Microsoft Windows '98
- Microsoft Windows '00
- Microsoft Windows XP
- OS/2
- Novel NetWare®
- SVR4

- SCO UNIX
- SCO XENIX
- Solaris™
- IBM® AIX®-RS/6000™
- HP-UX
- SGI
- Digital UNIX
- Red Hat (LINUX)





Log Menu

Extended Battery Life

- Current source from batteries for step loads is no longer required with the installation of IGBT in both the converter and the inverter. Previous UPS systems required assistance from batteries when the converter was unable to supply the required current. This cycling of batteries caused shorter life.
- Mitsubishi Electric IGBT incorporate the latest technologies and provide step load applications (0-100%) without the use of batteries, thus ensuring maximum battery service life (i.e., lower lifetime cost of UPS system).

Internal Maintenance Bypass

All 2033D Series UPS systems are equipped with an internal wrap around maintenance bypass system for greater maintenance flexibility.

- UL 1778 approved

Superior Control

All 2033D Series UPS systems use pulse width modulation (PWM) for superior control and performance. A digital signal processor (DSP) ensures precise control of all input/output parameters.

Operator-Friendly Control Panel Features:

- Mimic bus diagram
- Operator control station
- Touch panel input

LCD Monitor Displays:

- System metering
- Menu-driven start-up procedures
- Menu-driven operating procedures
- History of events
- Load true power factor

Additional Features:

- Password lock out for start/stop operation
- EPO button

Real-Time Battery Monitoring

- Remaining battery time displayed for operator
- Integrated "DiamondSense" system automatically detects weak cells

Superior Functions

- Automatic restart
- Automatic retransfer
- Converter walk-in function
- Battery monitoring
- 2 sets "Form C" dry contacts of selectable items
- Large overload/overcurrent capacity
- Battery temperature compensation
- Adjustable DC cut-off
- Line drop compensation

Quiet Operation

- 30-80kVA→65dB (A scale, 1m)

Warranty

Standard warranty is two years, including parts and labor.

(NOTE: All information subject to change without prior notice.)

GSA Contract Number

GS-07F-9526G



2008 Nemertes Award Winner for
"Best Small Business Provider for Power Systems"

Dimensions • Weights • Specifications

UPS Units

kVA / kW	480V / 208V Dimensions (W x D x H) (inch)	Weight (lbs)	480V / 480V Dimensions (W x D x H) (in)	Weight (lbs)
30 / 24	34 x 31.5 x 70.9	2,050	34 x 31.5 x 70.9	2,050
50 / 40	34 x 31.5 x 70.9	1,580	34 x 31.5 x 70.9	1,580
80 / 64	34 x 31.5 x 70.9	1,980	34 x 31.5 x 70.9	1,980

Notes:

- 30kVA weight includes internal batteries (580 lbs.)
- 30kVA battery back-up, 6 minutes.

CLC Cabinets

kVA	Part Number	System Voltage	Dimensions ‡ (W x D x H) (inch)	Weight (lbs)
30	CLC-MMS1-030-480	480V/480V	36 x 29.5 x 71	540
30	CLC-MMS3-030-208	480V/208V	36 x 29.5 x 71	760
50	CLC-MMS1-050-480	480V/480V	36 x 29.5 x 71	540
50	CLC-MMS3-050-208	480V/208V	36 x 29.5 x 71	910
80	CLC-MMS1-080-480	480V/480V	36 x 29.5 x 71	540
80	CLC-MMS3-080-208	480V/208V	42 x 29.5 x 71	1,270

Notes:

‡ Dimensions and weights are subject to change without notice. Consult MEPMI for exact dimensions and weights.

- Consult MEPMI UPS Engineering Department for "special" CLC cabinet configurations.

Specifications: 2033D Series 30kVA – 80kVA

Rated Output kVA	30	50	80
Rated Output kW	24	40	64
AC INPUT			
Configuration	3 phase, 3 wire		
Voltage	480 V +15% to -15% (-30% can be operated)		
Frequency	60 Hz (45.4Hz to 65Hz)		
Reflected Current THD	4% typ. at 100% load; 7% typ. at 50% load		
STATIC BYPASS INPUT			
Configuration	3 phase, 3 wire		
Voltage	480 V ±10%		
Frequency	60 Hz		
BATTERY			
Type	Lead Acid		
Ride Through	Application specific		
Nominal Voltage	480 VDC		
Minimum Voltage	401 VDC		
Number of Cells	240		
AC OUTPUT			
Configuration	3 phase, 4 wire		
Voltage	120/208V, 277/480V		
Voltage Stability	±1%		
Frequency	60 Hz		
Frequency Stability	±0.05% in free running mode		
Power Factor	0.8 nominal		
Power Factor range	0.8 – 1.0 lagging (within output kW rating)		
Voltage THD	2% typical THD at 100% Linear Load; 5% typical THD at 100% non-linear load		
Transient Response	±3% at 100% load step; ±1% at loss/return of AC power; ±3% at load transfer to/from static bypass		
Transient Recovery	16.6 ms		
Inverter Overload	125% for 10 minutes, 150% for 1 minute		
System Overload	1000% for 1 cycle (with bypass available)		
Bypass Overload	150% for 1 minute		
ENVIRONMENTAL			
Cooling	Forced air		
Operating Temperature	32°F ~ 104°F (0°C - 40°C); Recommended 68°F - 86°F (20°C - 30°C)		
Relative Humidity	5% ~ 95% non-condensing		
Altitude	0 ~ 9000 feet no derating		

Consult Mitsubishi for Battery Cabinet Configurations.

UPS

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